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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/086,590 | 02/28/2002 | Brian F. Ruff | 1528.031US1 | 9015 |

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EXAMINER

MATZ, DANIEL R

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 04/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,590

Applicant(s)

RUFF ET AL.

Examiner

Daniel Matz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 6 is objected to because of the following informalities: The word "is" between "stop" and "attached" should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 25-27 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the claims recite a method including forming (manufacturing) an electronic module, a display unit, and a flexible guide. The specification does not disclose methods of manufacturing these devices, and is therefore not enabling of the claims.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 recites the limitation "the flexible guide frame" in line 2 of the claim.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 7-13, and 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,493,146 granted to Cronin in view of Japanese Patent Application 2001-500432 by Katsuji et al.

Regarding claim 1, Cronin discloses (Fig. 2) an avionic wiring system comprising a flexible guide (10 – wiring harness) for connection between a first device and a second device. Cronin does not disclose a flexible guide that limits communication line movement to substantially a two dimensional plane. Katsuji et al. disclose a flexible guide (2) that protects the communication line (1) and limits communication line movement to substantially a two dimensional plane. In particular, the portions of the protector of Kasuji et al. designated as 11a-11c and 14a-14c would, when locked together, limit movement to a substantially a two dimensional plane by the action of the hinges (14h and 14g). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the protector of Katsuji et al. into the wiring system of Cronin to protect the communication line and, at the same time, limit movement of the communication line to substantially a two dimensional plane.

Regarding claim 2, the orientation of the wiring guide vertically or horizontally would be an obvious variation to one of ordinary skill, to accommodate a particular need for routing the communication line. Additionally, given the application of the wiring guide to an aircraft, the orientation will change during operation of the aircraft and would be expected to vary between horizontal and vertical.

Regarding claim 3, the flexible guide of Katsuji et al. would include an S shape (see figure 1) when the communication line is disconnected and retracted from the front panel.

Regarding claim 4, the flexible guide of Katsuji et al. includes a number of jointed segments.

Regarding claim 7, Cronin discloses (Fig. 2) an avionics instrument mounting system comprising a first device (not shown, but clearly indicated in Figure 2 at the opposite end of the wiring harness (10)), attached to a mounting surface (as would be typical in an aircraft), and a second device (18) coupled to the first device by at least one communication line. Katsuji et al. teach the flexible guide as discussed above regarding claim 1.

Regarding claim 8, the disclosure of Cronin is generic to an aircraft instrument panel and would inherently include a display unit (18) on the panel connected to an avionics module, as is typical and well known in the aviation art. As to limitations that are considered to be inherent in a reference, note the case law of In re Ludtke, 169 USPQ 563, In re Swinehart, 169 USPQ 226, In re Fitzgerald, 205 USPQ 594, In re Best et al., 195 USPQ 430, and In re Brown, 173 USPQ 685, 688.

Regarding claim 9, the orientation of the wiring guide vertically or horizontally would be an obvious variation to one of ordinary skill, to accommodate a particular need for routing the communication line. Additionally, given the application of the wiring guide to an aircraft, the orientation will change during operation of the aircraft and would be expected to vary between horizontal and vertical.

Regarding claims 10 and 11, the flexible guide of Katsuji et al. would include an S shape (see figure 1) when the communication line is disconnected and retracted from the front panel. Any S shape also includes a C shape.

Regarding claim 12, the disclosure of Cronin is generic to an aircraft instrument panel and would inherently include a flat panel screen as the display device.

Regarding claim 13, the flexible guide of Katsuji et al. includes a number of jointed segments.

Regarding claim 21, the claimed method of mounting an avionics instrument system is inherent in the disclosure of Cronin, as modified by the teaching of Katsuji et al. and discussed above regarding claim 7.

Regarding claim 22, the wiring guide of Katsuji et al. would limit movement to a two dimensional plane, as discussed above regarding claim 1. Further, the orientation of the wiring guide to limit movement to a vertical plane would be an obvious variation to one of ordinary skill, to accommodate a particular need for routing the communication line.

Regarding claim 23, the disclosure of Cronin is generic to an aircraft instrument panel and would inherently include a flat panel screen as the display device.

Regarding claim 24, the flexible guide of Katsuji et al. includes a number of jointed segments.

Regarding claims 25-27, the claimed method of manufacturing and mounting an avionics instrument system is inherent in the disclosure of Cronin, as modified by the teaching of Katsuji et al. and discussed above regarding claims 1 and 3.

8. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cronin and Katsuji et al. as applied to claims 1-4 above, and further in view of USPN 5,534,665 granted to Long.

Regarding claim 5, Long teaches a flexible guide frame (16) attached to a flexible guide (14) and adapted for mounting to a mounting frame (engine compartment – see fig. 1) in order to secure the flexible guide in place. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the flexible guide of Katsuji et al. to include a flexible guide frame attached to the flexible guide and adapted for mounting to a mounting frame in order to secure the flexible guide in place.

Regarding claim 6, Long teaches the use of multiple flexible guide frames (16A-16D) which function to stop the flexible guide from moving.

9. Claim 14 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cronin and Katsuji et al. as applied to claims 1 and 7 above, and further in view of USPN 4,871,134 granted to Oikawa.

Regarding claim 14, Cronin discloses (Fig. 2) an avionics instrument mounting system comprising a mounting frame (22) attached to a mounting surface (20), an

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electronic module (not shown, but clearly indicated in Figure 2 at the opposite end of the wiring harness (10)), attached to mounting frame (as would be typical in an aircraft), and a display unit (18) coupled to the first device by at least one communication line. Katsuji et al. teach the flexible guide as discussed above regarding claim 1. Neither Cronin nor Katsuji et al. teach a stop coupled to the mounting frame and limiting the flexible guide to a depth within the mounting frame. Oikawa teach the use of a stop (12) on a flexible guide (17) to limit the depth of movement of the flexible guide within a mounting frame (19) and prevent displacement of the wiring harness (see abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the use of a stop as taught by Oikawa into the avionics instrument mounting system of Cronin, as modified by the teaching of Katsuji et al., to limit the depth of movement of the flexible guide and thus prevent displacement of the wiring harness.

Regarding claim 17, as best understood, Oikawa teach the use of a stop (12) attached to a flexible guide frame (11).

Regarding claim 18, Cronin discloses (Fig. 2) an avionics instrument mounting system including an electrical connector (30) located on an end of the flexible guide and being accessible when the display unit (18) is in an unmounted state and the flexible guide is in an extended state.

Regarding claim 19, Cronin discloses (Fig. 2) an avionics instrument mounting system for a cockpit instrument panel (col. 1, line 10).

Regarding claim 20, the disclosure of Cronin is generic to an aircraft instrument panel and would inherently include a device having a motherboard.

10. Claims 15 –16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cronin, Katsuji et al., and Oikawa as applied to claim 14 above, and further in view of Long.

Regarding claim 15, Long teaches a flexible guide frame (16) attached to a mounting frame (engine compartment – see fig. 1) along a range of mounting locations (16A-16D) with respect to the mounting frame in order to secure the flexible guide in place. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the flexible guide of Katsuji et al. to include a flexible guide frame attached to the flexible guide and adapted for mounting to a mounting frame along a range of mounting locations in order to secure the flexible guide in place.

Regarding claim 16, Long teaches a horizontal range of mounting locations (Fig. 1, 16A-16D).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

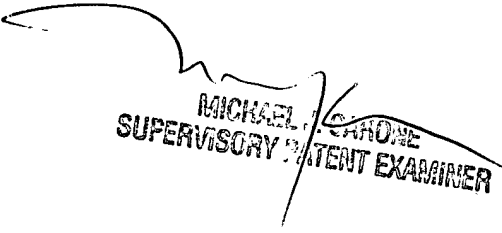
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Matz whose telephone number is (703) 306-4164. The examiner can normally be reached on Mon-Thurs, alt Fri 7:30am to 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on (703) 306-4198. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 306-4195 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-4180.

drm
March 26, 2003


MICHAEL J. CARONE
SUPERVISORY PATENT EXAMINER